

U.S. PTO Customer No. 25280

Case# 5392

REMARKS

Claims 1-23 were rejected under 35 USC 102(b) as being anticipated by Oku et al. (US Pat. No. 5,882,808). The Examiner submits Oku et al. disclose silver ion exchange compounds and other metals incorporated in hard surface coatings which are able to impact resistance to heat and provide bacteriacidal effects to the substrates (col. 4, line 46-65 and Example 13). Although *Klebsiella pneumoniae* was not tested by Oku et al., the Examiner contends that "a number of other bacteria were tested (col. 7) and one would find, since the compositions are the instant, the test results would be, too" (Paper 5). The Examiner also submits that while Oku et al. teach baking temperatures of 1200°C, surely baking temperatures of between 100°C and 800°C, as claimed by Applicants, would work as well (Paper 9).

Applicants respectfully submit that the instant invention is clearly not anticipated by the Oku et al. reference because the Oku et al. reference fails to disclose each and every limitation or element of Applicants' invention, as currently claimed. Case law shows that a claim is anticipated only when the single reference discloses the identical invention, in as complete detail as is contained in the claim, and when every element of the claimed invention is literally present, arranged as claimed, in the reference. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Since the baking temperatures taught by Oku et al. and Applicants are in fact not the same, one cannot conclude that the baking temperature of Oku et al. would provide the same results as the baking temperature disclosed by Applicants. Oku et al. illustrate, in every Example (Examples 1-12), that the operative baking temperature for adhering the glaze layer to the ceramic product is 1200°C. In contrast, Applicants illustrate, in every Example (Examples 1-

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32), that the operative baking temperature for adhering the sol-gel film to the hard surface substrate is 100°C to 800°C. Clearly then, one can see that Applicants' claimed invention is not anticipated by Oku et al.

Furthermore, Oku et al. also disclose that the anti-bacterial and anti-fungal properties of Oku et al. are destroyed at lower baking temperatures, such as those temperatures taught by Applicants invention. More specifically, Oku et al. state that ceramics glazes "incorporating metals such as silver melt at a lower temperature than the baking temperature of ceramic products, the metal component exhibiting anti-bacterial and anti-fungal properties often sinks into the interior and/or bottom portions of the glaze, which in turn leads to a *predominant or total loss of this metal component from the surface of the ceramic product actually in contact with the bacterium and fungi*, i.e., the enamel surface" (emphasis added) (col. 2, lines 60-67 to col. 3, line 1).

Thus, Oku et al. disclose that baking at temperatures lower than 1200°C result in a ceramic product that is not anti-bacterial and anti-fungal. Oku et al. requires high temperature baking in order to achieve any anti-bacterial effect for the ceramic product. Therefore, Oku et al. cannot be anticipatory to Applicants claimed invention, and Applicants respectfully request that the rejection be withdrawn.

35 USC Section 102 (e) Rejections:

Claims 1-23 were rejected under 35 USC 102(e) as being anticipated by Sherman (US Patent Application Publication 2002/0005145). The Examiner submits that Sherman discloses a sol-gel film, which incorporates metal oxides, applied to hard surfaces and exhibiting antibacterial efficacy. The Examiner contends that if the test results claimed by Applicants

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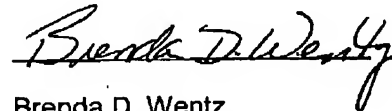
were carried out by Sherman, the same results – lack of heat/melt distortion and kill rate – would be found (Paper 5).

Sherman more specifically discloses dispersing nanoparticulate titanium dioxide in a polar sol-forming medium to make a sol suitable as a coating which may provide antimicrobial effects (see Abstract). Applicants have amended the independent claims (claim 1 and claim 16) to include the limitation that the inorganic antimicrobial agent is silver-containing. Silver-containing antimicrobial agents are not taught by Sherman. Thus, Applicants respectfully submit that claims 1-23, as currently amended, are novel over the Sherman reference.

In view of the above amendments and remarks, reconsideration of the pending claims is earnestly solicited.

Respectfully requested,

November 11, 2003



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